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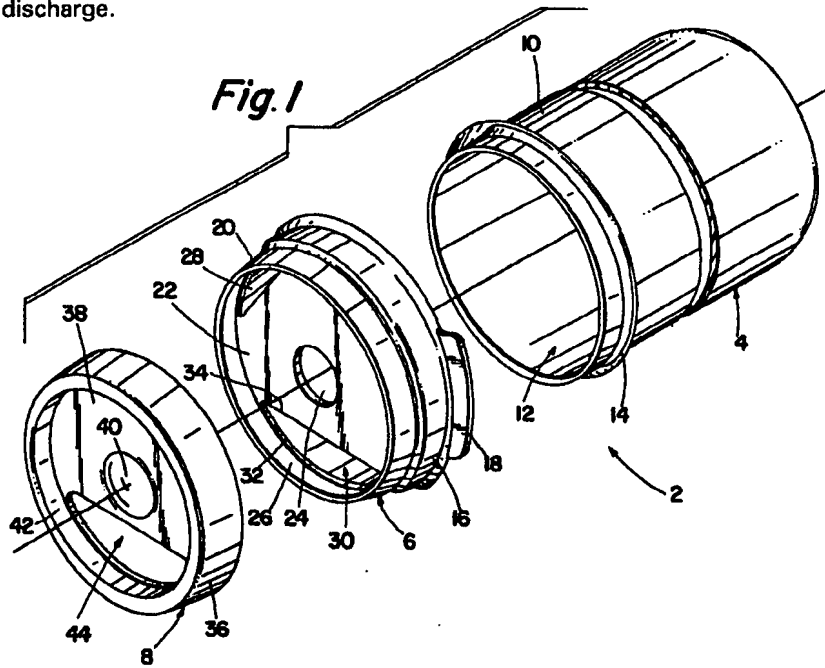
(58) Field of search

B8T

Selected US specifications from IPC sub-class B65D

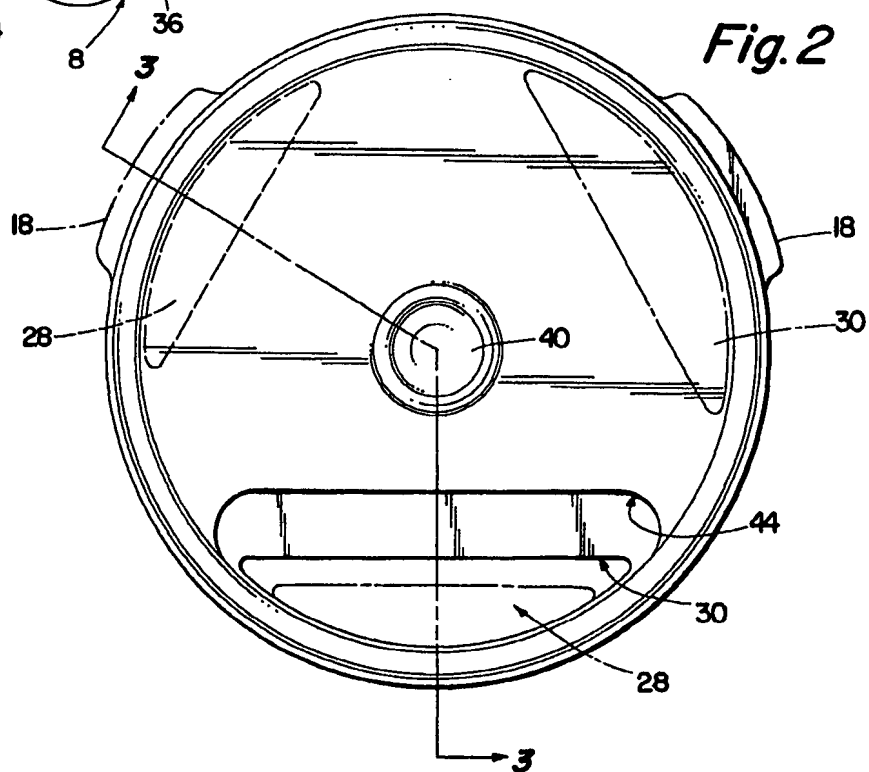
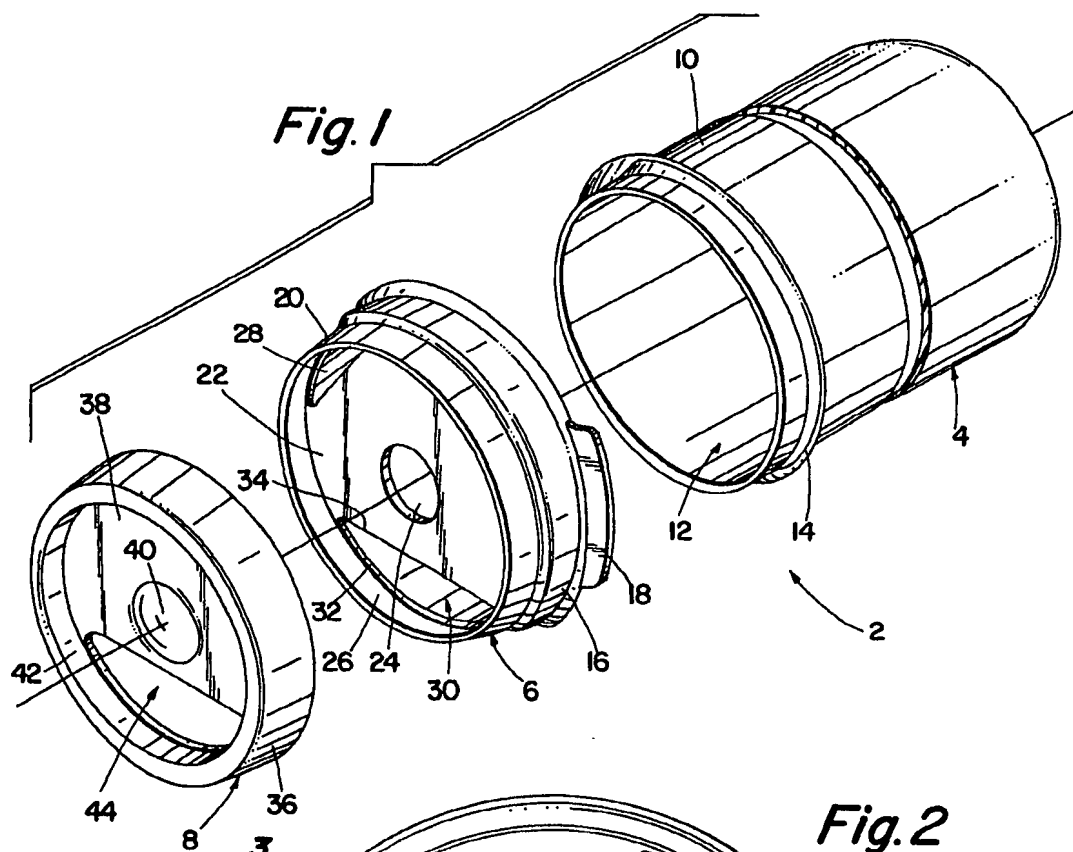
(54) Pasta dispenser

(57) A dispenser assembly (2) comprises a cylindrical canister (4), a cylindrical lid (6), and a cylindrical cap (8). The lid component (6) encloses the top of the canister body (4) and includes at least one profiled dispenser (28 or 30). The dispensing aperture is configured to include an arcuate body side (32) which is disposed adjacent to the peripheral rim of a top surface (22) of the lid (6). A linear side (34) of the aperture extends between opposite ends of the curved arcuate side (32). Elongate pasta is stored in the canister and is portioned out through either aperture (28 or 30). Because of the shape of the apertures, pasta can be accurately portioned out until the canister is substantially depleted. The cap (8) and the lid (6) are provided with outward extending flanges (42, 26, respectively) which align in a co-planer relationship with internal surfaces of the canister, whereby providing a continuous arcuate surface against which the pasta is supported during discharge.



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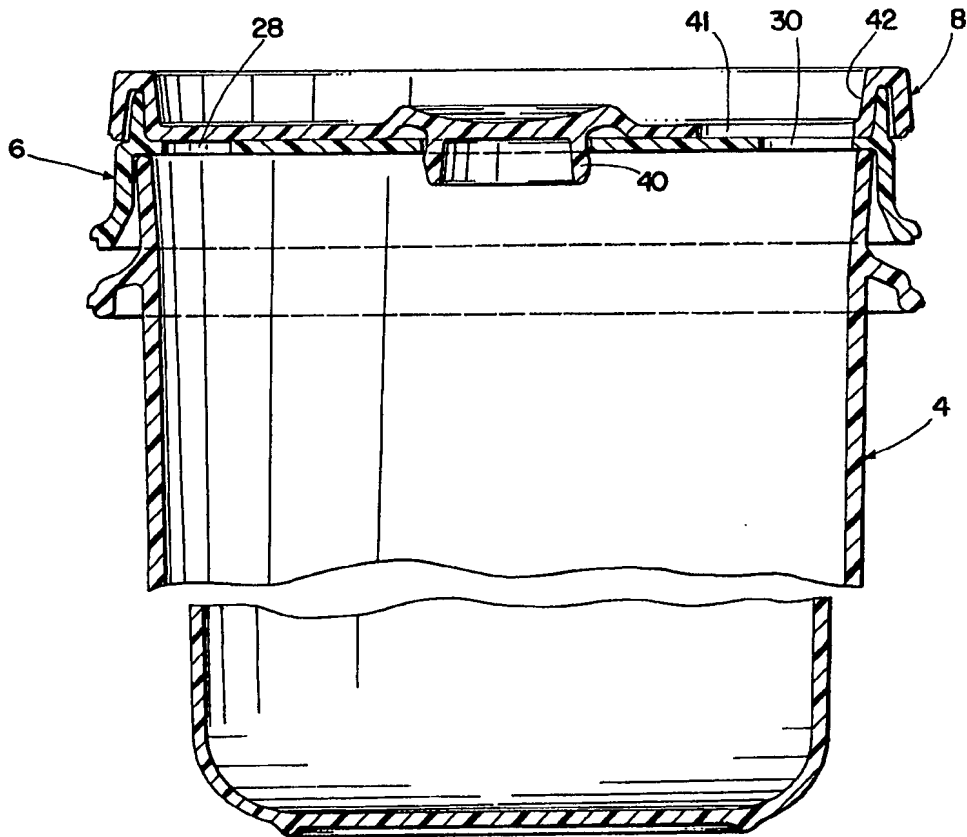


Fig. 3

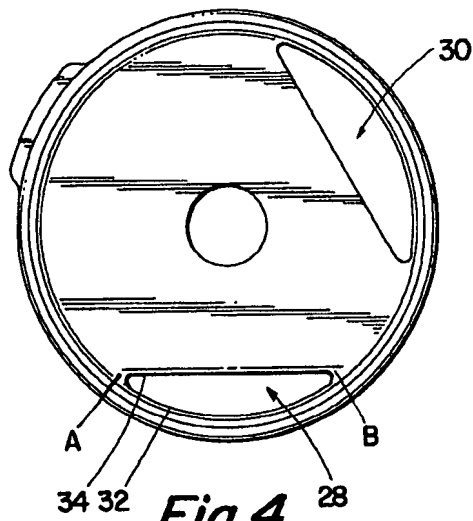


Fig. 4

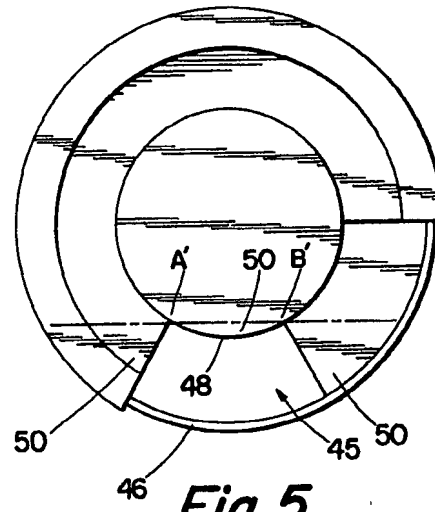


Fig. 5
PRIOR ART

SPECIFICATION

Pasta dispenser

5 *Background of the Invention*

Field of the Invention

The subject invention relates generally to dry food dispensing containers, and in particular to elongate pasta dispensers having integral portion discharging means.

The Prior Art

Containers for storing and dispensing elongate pasta are well known and find common use in household kitchens. Such containers typically provide a cylindrical canister for storing elongate pasta in an upright axial orientation, a lid for enclosing the canister and additionally adapted to function as a portion dispenser, and a dial cap rotatably mounted to the lid component. The lid is provided with at least one profiled aperture therethrough sized to permit the simultaneous axial passage of a predetermined volume of pasta therethrough when the canister is rotated into a horizontal or inverted position. The dial cap components of pasta dispensers on the market include a sized opening which can be rotated into a superposed alignment over the lid aperture, whereby permitting discharge of pasta. Alternatively, the cap can be rotated into a storage position which carries the lid aperture to prevent inadvertent spillage of pasta.

While available pasta dispensers have been favorably received in the market, a common deficiency prevents them from achieving a satisfactory functional performance level. That deficiency resides in the shape of the sized aperture through which pasta is meted. Known apertures are shaped either trapezoidal or triangular in plan view. In either case, with the canister in the horizontal or inverted dispensing position, the quantity of pasta within the canister must far exceed the aperture volume for proper portion dispensing to occur. As pasta is depleted from the canister, the fill line defined by the remaining pasta migrates downward relative to the horizontally disposed canister and will eventually pass the upper boundary of the lid aperture. At that point, however, the pasta volume in conventional dispensers is no longer distributed so as to fill the portion-sized lid aperture. Such is the case even though the total pasta volume remaining in the canister exceeds the lid aperture volume. Portionment discharge by the dispenser is thereupon no longer possible and guesswork becomes necessary in order to withdraw a desired quantity of pasta from the container.

Summary of the Present Invention

A pasta dispenser is disclosed comprising a cylindrical storage canister open at one end, a canister lid having a circular top surface, and

at least one sized aperture dimensioned to axially discharge a volume of pasta therethrough. Each aperture is of a semi-elliptical shape in plan view defined by an arcuate bottom side positioned to proximately follow the outward curvature of the top lid surface. Each aperture is further defined by a linear top side which extends between opposite ends of the arcuate aperture side and which substantially connects opposite points of the circular top lid surface. A rotatable cap is provided having a like-shaped dispensing opening for exposing and closing the lid aperture in selective fashion.

Accordingly, the fill line of the pasta in a horizontally disposed canister will migrate downward with depletion and eventually coincide with the linear top side of the lid aperture. The fill line will not pass below the upper boundary of the lid aperture until the volume of the remaining pasta is less than the volumetric size of the aperture. Pasta portion dispensing is therefore continuous until such time as substantial depletion of the pasta within the canister has occurred.

A further aspect of the present invention is that the lid and cap are provided with outward directed peripheral rim flanges which are substantially co-planar with side walls of the cylindrical canister. Resultingly, the canister in the horizontal or dispensing position serves to collect and to aggregate the remaining pasta so as to align with the sized cap aperture. Moreover, support of the pasta is substantially along its entire length throughout its discharge which facilitates easy removal.

Accordingly, it is an objective of the present invention to provide a pasta dispenser having integral discharge means.

A further objective of the present invention is to provide a pasta dispenser having portion discharge apertures shaped to permit free-flow of a preset volume of pasta therethrough.

Yet a further objective of the present invention is to provide a pasta dispenser having means for collecting and aggregating the remaining pasta to facilitate free and accurate portion dispensing thereof.

Still a further objective of the present invention is to provide a pasta dispenser having apertures shaped to permit accurate portion discharge of pasta until the pasta contained by the dispenser is substantially depleted.

A further objective is to provide a pasta dispenser having integral capping means to selectively permit and inhibit discharge of pasta from the dispenser.

These and other objectives, which will become apparent to one skilled in the art, are achieved by a preferred embodiment which is described in detail below, and which is illustrated by the accompanying drawings.

Brief Description of Accompanying Drawings

Figure 1 is an exploded perspective view of the subject pasta dispenser.

Figure 2 is a top plan view of the subject pasta dispenser.

Figure 3 is a transverse section view thereof taken along the broken line 3-3 of Fig. 2.

- 5 Figure 4 is a top plan view of the lid component of the subject invention illustrating a pasta fill line superposed thereagainst.

- 10 Figure 5 is a representation of the prior art illustrating in top plan view a lid having a portion aperture therethrough with a pasta fill line superposed thereagainst.

Detailed Description of the Preferred Embodiment

- 15 Referring first to Fig. 1, the subject dispenser assembly 2 is shown as generally comprising three components: a cylindrical canister body 4; a cylindrical lid component 6; and a cylindrical cap 8. The canister 4 includes cylindrical sides 8 which define an internal cavity 12 open at a top end. Midway along the length of the cylinder sides 10 is an outward extending peripheral flange 14.

- 20 The lid component 6 of the dispenser assembly 2 is provided with generally cylindrical sides 16. An outward extending rim flange 18 extends from a lower end of the sides 16. It will be appreciated that the outward extending flange 18 constitutes a handle for the purpose of removing the lid component 6 from the cylindrical canister 4. The sidewalls 16 of the lid 6 are stepped inwardly at the forward end as shown at 20. The lid 6 is further provided with a circular top surface 22 from which the stepped sides 20 project. Centrally disposed within the top surface 22 is a central assembly aperture 24. Inward facing surfaces 26 of the stepped sides 20 extend outward from the peripheral rim of the circular top surface 22.

- 40 As shown in Fig. 1, two apertures 28, 30 are provided within the top surface 22 having a shape specified below. The apertures 28, 30 are sized having different respective volumes. While only two apertures 28, 30 are shown, it will be appreciated that additional, differing sized apertures may also be provided within the top surface 22, if so desired.

- 50 The shape of each dispensing aperture 28, 30 can be understood as follows. Each aperture is defined in part by an arcuate bottom side 32 which is disposed adjacent to the peripheral rim of the top surface 22 of lid 6 and generally follows the curvature thereof. A linear side 34 of the aperture extends between opposite ends of the curved arcuate side 32. Accordingly, the linear side 34 is seen to represent essentially a chord of the circular top surface 22 which connects opposite circumferential points thereof. In general, each of the apertures 28, 30 have a semi-elliptical shape in which the arcuate portion thereof proximately coincides with the curved periphery of the top surface 22. It will also be appreciated from Fig. 1 that the outward ex-

tending inward sides 26 of the stepped lid portion 20 lie essentially co-planar with the arcuate sides 32 of the apertures 28, 30.

- 70 The cap component 8 likewise comprises cylindrical sides 36 and has a circular top surface 38. A registration bead 40 is disposed centrally of the circular top surface 28 and a peripheral rim flange 42 extends outward therefrom. A selection aperture 44 is disposed within the circular top surface 38 and has a general shape similar to the apertures 28, 30 of the lid component 6.

- 80 Assembly of the subject dispenser proceeds as follows. The canister 4 is designed to contain a volume of elongate pasta, which will be stored in an upright axial orientation. The lid component fits closely over the open end of the cylindrical canister 4 and bottoms against the peripheral flange 14. Permanently and rotatably secured to the lid component 6 is the cap component 8. The cap component 8 rotatably fits over the end of the lid component 6 and rotates against the inward stepped sides 20 thereof.

- 90 Referring collectively to Figs. 1, 2, and 3, the dispenser assembly 2 is utilized as follows. The canister 4 is rotated into a horizontal configuration as shown in Fig. 1 so that the collective pasta stored inside is gathered at the bottom by the curved sides 10. The cap component 8 is thereafter rotated until the aperture 44 coaligns with either aperture 28 or aperture 30. Apertures 28, 30 are sized so as to represent the volume of pasta necessary for a specified number of portions. For example, the smaller sized aperture 28 can be sized to represent the volume of pasta necessary for a single serving portion and the larger aperture for a multiple serving portion. Upon coalignment of the cap aperture 44 with, for example, aperture 30, the canister body 4 is further rotated into an inverted position so that the pasta stored therein slides through the co-aligned apertures.

- 110 It should be appreciated that the outward extending peripheral cap rim flange 42, the outward extending inward sidewalls 26 of lid 6, and the internal surfaces of the canister sides 10 are substantially co-planar. The result is that the pasta to be dispensed through apertures 30, 44 moves along a continuous arcuate surface composed by the aforementioned component surfaces. Smooth egress of the pasta through the co-aligned apertures results. Further, because of the aforementioned curved adjoining component surfaces, the pasta remains aggregated throughout its discharge from the canister body 4 in a close axial alignment. Accurate portion discharging is thereby enhanced.

- 125 Considering the dispenser assembly 2 in its horizontal or inverted discharge position as shown in Fig. 1 and 4, it can be seen that as the pasta stored within the canister 4 is depleted, the fill line defined by the top of the

remaining pasta progresses downward. The fill line is representatively shown by line A-B in Fig. 4. Fill line A-B extends across the width of the canister and across the top surfaces

22, 38 of components 6, 8 respectively. For purposes of explanation, portion dispensing aperture 28 will be referred to.

Because of the shape of aperture 28, as the pasta fill line A-B progresses downward, it will at some point coincide with the linear top-side 34 of the aperture. At that point, the volume of pasta remaining in the canister will substantially equal the volumetric portion of pasta represented by the aperture. Because of the collective cooperation between the curved bottom sides of the canister 4, the lid 6, and the cap 8, the remaining pasta is collected at the bottom of the dispenser assembly and can be discharged through the aperture 28. The dispenser assembly thus serves to accurately portion out pasta down to the point where the volume of pasta remaining in the canister 4 equals the volume of the aperture 28.

In contrast with the foregoing, the prior art is shown in Fig. 5. The fill line represented by A'-B' is shown as extending across the top lid of the prior art dispenser assembly. The prior art lid is shown as generally comprising a trapezoidal dispensing aperture 45 defined by a top arcuate boundary 46 and bottom arcuate boundary 48. It will be appreciated that as the fill line of A'-B' migrates downward through depletion, it at some point will cross the top arcuate boundary 46 of the dispensing aperture 45. Below this point, the dispenser cannot discharge an accurate portion of pasta through aperture 45 since the entire aperture must be filled in order for the user to withdraw the preselected volume of pasta. However, as shown in Fig. 5, at the point when the fill line crosses over the top arcuate boundary 46 of the discharge aperture 45, a substantially greater volume of pasta than the volume of aperture 45 remains in the canister. An excess volume of pasta is therefore required in order for the prior art aperture to remain functional. That excess pasta volume is represented at 50 in Fig. 5. It will be appreciated that after the fill line drops below the top boundary of the aperture 45 accurate discharge of pasta is not possible even though the total remaining volume of pasta within the canister may in fact exceed the volume of aperture 45.

From the foregoing, it will be appreciated that the subject invention provides a pasta dispensing assembly which is simple to manufacture and which consists of a minimal number of components. The dispenser assembly cap and lid are provided with apertures of a shape which enhances free movement of elongate pasta therethrough. Further, the coaligning flanges of the cap, the lid, and the cylindrical canister body insure that the pasta will be supported along its entire length through

the discharge procedure. As a result, accurate and smooth egress of the pasta from the canister is facilitated. Finally, the shape of the apertures within the lid and cap component insure that the apertures continue to function to portion out volumes of pasta until the pasta within the canister is substantially depleted. This advantage is realized because the pasta fill line must pass the upper linear side of each dispensing aperture, substantially coextensive along its length. In contrast, the prior art apertures become dysfunctional prior to the point when the volume of remaining pasta within the canister equals the volume of the dispensing aperture.

While the above describes the preferred embodiment of the subject invention, the teachings herein are not to be so confined. Other embodiments, which will become apparent to one skilled in the art, and which utilize the teachings herein set forth are intended to be within the scope and the spirit of the subject disclosure.

90 CLAIMS

1. An elongate pasta portion dispenser comprising:

a cylindrical pasta storage canister open at one end;

a lid attached to enclose said one container end, said lid having a circular top surface and at least one sized aperture therethrough dimensioned to equate with a preselected portion volume of said pasta;

said dispensing aperture having a profiled semi-elliptical shape defined by an arcuate side adjacent to and following along the outward curvature of said top lid surface, and further defined by a linear side extending between opposite ends of said arcuate side and substantially connecting opposite circumferential points of said circular top lid surface.

2. A dispenser assembly, according to Claim 1, further comprising pasta collecting means for axially aggregating said pasta for discharge through said aperture.

3. A pasta dispenser assembly, according to Claim 2, wherein said pasta collecting means comprising an outward peripheral rim flange extending from the perimeter of said lid top surface and disposed in a co-planar orientation with inward cylindrical surfaces of said canister.

4. A pasta dispenser assembly, according to Claim 1, further comprising a cap mounted over said lid to rotate about a longitudinal center axis of said canister, said cap having a circular top surface, and a selection aperture therethrough positionable to overlap and expose said lid aperture.

5. A dispenser assembly, according to Claim 4, wherein said dispenser assembly further comprising means for collecting said pasta for discharge through said overlapping cap and lid apertures.

6. A dispenser assembly, according to Claim 5, wherein said pasta collecting means comprising a peripheral rim flange extending outward from said circular top surfaces of each said cap and said lid and aligning in coplanar orientation with inward cylindrical surfaces of said canister.

7. A dispenser assembly, according to Claim 6, wherein said cap aperture having a substantially identical shape as said lid aperture.

8. A dispenser assembly substantially as described herein with reference to and as illustrated in the accompanying drawings.

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